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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,474	11/20/2001	Weihai Chen	212516	3151
23460	7590	05/25/2005	EXAMINER	
LEYDIG VOIT & MAYER, LTD TWO PRUDENTIAL PLAZA, SUITE 4900 180 NORTH STETSON AVENUE CHICAGO, IL 60601-6780			DIVECHA, KAMAL B	
			ART UNIT	PAPER NUMBER
			2151	

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/989,474

Applicant(s)

CHEN, WEIHAI

Examiner

KAMAL B. DIVECHA

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20050425.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-31 are presented for examination.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 04/25/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

Claim 29 is objected to because of the following informalities: as is claim 29 is dependent on claim 29. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 7-8 and 17-18 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "the node" in line 44. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the node" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claims 17-18 recites the same limitation as in claims 7-8. Therefore, claims 17-18 are rejected for the same reasons as set forth in claims 7-8.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 21-31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 21 is not directed to any one of the four statutory subject matter mentioned above based on the broadest interpretation of the claim. The phrase “framework” is defined as a reusable basic design structure, consisting of abstract and concrete classes, that assists in building applications, in object-oriented programming. Therefore, the claim as a whole is directed to a non-statutory subject matter of a code or a program or software.

Claim 21 is also not limited to tangible embodiment based on the broadest interpretation. Phrases such as agents, subnets, network etc., are not limited to tangible embodiments. As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

As per claim claims 22-23, they do not further include any tangible embodiments nor they solve the above errors. Therefore, they are rejected for the same reasons as set forth above.

Claims 24-31 are not limited to tangible embodiment based on the broadest interpretation. Phrases such as discovery agents, subnets, network etc., are not limited to tangible embodiments. As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2, 4-5, 7-8, 11-12, 14-15, 17-18, 24-25, 27-28 and 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Matheny et al. (hereinafter Matheny, Pub. No.: US 2002/0161883 A1).

As per claim 1, Matheny discloses a method for performing resource discovery in a network having multiple subnets and wherein inter-subnet discovery agents installed on nodes within the multiple subnets support inter-subnet resource discovery, the method comprising: designating, within a first subnet, a first inter-subnet discovery agent on a first node as in active discovery agent (fig. 1 and pg. 1 paragraph #8-9); discovering, by the first inter-subnet discovery agent, active discovery agents on neighboring subnets in the network (pg. 1 paragraph #10-11, pg. 2 paragraph #19, 21, 28); and propagating, by the first node containing the active discovery agent, an inter-subnet resource discovery search request to the active discovery agents on neighboring subnets (pg.1 paragraph #9, 10, 12; fig. 2 item #204).

As per claim 2, Matheny discloses the process wherein the resource discovery search request is a network device discovery request (pg. 2 paragraph #21).

As per claim 4, Matheny discloses the process of receiving discovery data (configuration data includes network addresses) collected from a network device (read as second node containing active discovery agent) by a discovery agent (read as first node, pg. 3 step 1 of claim 1); and storing the information in a list (fig. 5 item# 504).

As per claim 5, Matheny discloses the process of receiving, by the first node containing the active discovery agent, a request to provide discovery information for a discoverable resource and in response performing, during the propagating step, the sub-steps of: passing the request to the active discovery agent on the first node; searching, by the active discovery agent on the first node, the list of neighboring active discovery agents; and issuing a search request identifying a resource discovery requester to at least one neighboring active discovery agent in the list identifying neighboring active discovery agents (pg. 1 block# 12 and pg. 2 block #19).

As per claim 7, Matheny discloses the process of storing and or copying (publishing) data for discovered machine into discovery document (fig. 5 item #504).

As per claim 8, Matheny discloses the process wherein the network management system comprises a set of device discovery agents (fig. 1 item #106), further comprising the step of: determining, by the set of device discovery agents, discovery information for the discoverable resources present on the subnet (fig. 3 item #310 and #312).

As per claim 24, Matheny discloses a system for automating network-wide resource discovery in networks having multiple subnets: a set of inter-subnet discovery agents installed in nodes within the multiple subnets support inter-subnet resource discovery (pg. 1 block #8-11); and a first inter-subnet discovery agent on a first node designated as an active discovery agent (fig. 1 and pg. 1 paragraph #8-9), the first inter-subnet discovery agent including procedures for facilitating: discovering active discovery agents on neighboring subnets in the network (pg. 1 paragraph #10-11, pg. 2 paragraph #19, 21, 28); and propagating an inter-subnet resource discovery search request to the active discovery agents on neighboring subnets (pg.1 paragraph #9, 10, 12; fig. 2 item #204).

As per claims 11-12, 14-15, 17-18, 25, 27-28 and 30-31, they do not teach or further define over the limitations in claims 1-2, 4-5, 7-8 and 24. Therefore, claims 25, 27-28 and 30-31 are rejected for the same reasons as set forth in claims 1-2, 4-5, 7-8 and 24.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 6, 13, 16, 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matheny et al. (hereinafter Matheny, Pub. No.: US 2002/0161883 A1) in view of Schlonski et al. (hereinafter Schlonski, Pub. No.: US 2002/0196451 A1).

As per claim 3, Matheny does not explicitly disclose the process wherein network device discovery request is a request to identify printers in the network.

Schlonski from the same field of endeavor explicitly discloses the process wherein the network discovery request is to identify printers in the network (fig. 2 item #100, 102; pg. 2 paragraph 24-25). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Schlonski as stated above with Matheny in order to identify printers in the network.

One of ordinary skilled in the art would have been motivated because it would have been desirable to have a system by which the type of the newly-discovered printer is determined, and in response, a suitable configuration is sent to the printer (Schlonski, pg. 1 block# 9).

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As per claim 6, Schlonski discloses the process of transmitting to the resource discovery requester a response including the resource information (fig. 2). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Schlonski as stated above with Matheny in order to transmit a response including the resource information. One of ordinary skilled in the art would have been motivated because of the same reasons as set forth in claim 3 above.

As per claims 13, 16, 26 and 29, they do not teach or further define over the limitations in claims 3 and 6. Therefore, claims 13, 16, 26 and 29 are rejected for the same reasons as set forth in claims 3 and 6.

5. Claims 9-10 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matheny et al. (hereinafter Matheny, Pub. No.: US 2002/0161883 A1) in view Dowling (U. S. Patent No. 6,636,499 B1).

As per claim 10, Matheny does not explicitly disclose the process of manually selecting the active discovery agent.

Dowling, from the same field of endeavor discloses the process wherein the user designates (read as selects) the commander (active discovery agent, col. 18 L10-18 and fig. 15 item #300 and col. 13 L44-47). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Dowling as stated above with Matheny in order to manually select the active discovery agent.

One of ordinary skilled in the art would have been motivated because once the discovery agent is enabled; it can use information known about the network topology to identify other network devices in the network (Dowling, col. 10 L40-51).

As per claim 9, neither of the references explicitly discloses the process of automatically selecting, as the active discovery agent from a set of installed discovery agents. But it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Dowling to automatically select the active discovery agent as it is well known in the art that any action and/or procedure that can be done manually by a network administrator can also be done automatically by a computer program. One of ordinary skilled in the art would have been motivated so that an efficient and reliable discovery system is obtained.

As per claims 19-20, they do not teach or further define over the limitations in claims 9-10. Therefore, claims 19-20 are rejected for the same reasons as set forth in claims 9-10.

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Branson et al. (hereinafter Branson, U. S. Patent No. 6,865,728 B1) in view of Dowling (U. S. Patent No. 6,636,499 B1).

As per claim 21, Branson discloses a resource discovery framework for resource discovery in a network including multiple subnets and discoverable networked resources, the framework comprising: an active discovery agent designated for ones of the multiple subnets for identifying active discovery agents on neighboring subnets within the network (fig. 1, fig. 2 item #250 and #252); and a request propagation mechanism by which nodes containing the active discovery agents propagate an inter-subnet resource discovery search request to active discovery

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agents on neighboring subnets (fig. 3), however Branson does not explicitly disclose a selection mechanism for designating the active discovery agent within each subnet.

Dowling, from the same field of endeavor discloses the process wherein user designates the discovery agent as a commander (read as selection mechanism, fig. 2b and fig. 15 item #300 and col. 10 L29-67). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Dowling as stated above with Branson in order to designate the discovery agent within a subnet.

One of ordinary skilled in the art would have been motivated so that a single point of access used to configure and monitor all other agents in a network is obtained (Dowling, col. 10 L29-35) and further would have performed the requested function by the management console.

7. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Branson et al. (hereinafter Branson, U. S. Patent No. 6,865,728 B1) in view of Dowling (U. S. Patent No. 6,636,499 B1), and further in view of Das et al. (Pub. No.: US 2002/0026527 A1).

As per claim 22, Branson discloses a system wherein a list identifying discovery agents is maintained (fig. 1 and fig. 2 item #220), however Branson does not disclose a framework wherein a list is maintained by each discovery agent.

Das discloses a network comprising first and second network wherein second network includes two or more subnetworks wherein each subnetwork includes an associated subnet agent (see abstract and fig. 2). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Das to configure the subnet agent with the

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discovery framework agents of Branson in order to provide a discovery framework wherein a list identifying discovery agents are maintained in each discovery agent.

One of ordinary skilled in the art would have been motivated so that the list identifying discovery agents are distributed in a network for providing the list more efficiently.

As per claim 23, Branson discloses a system comprising a directory service in communication with the discovery agents in the network, the directory service including information corresponding to the lists maintained by the active agents (col. 6 L57 to col. 7 L17 and col. 10 L18-40).

Additional References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Ramanathan et al., U. S. Patent No. 6,182,136 B1.
- b. Goringe et al., Pub. No.: US 2003/0046427 A1.
- c. Reichmeyer et al., U. S. Patent No. 6,286,038 B1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on 10.00am-6.30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 18, 2005.



ZARNI MAUNG
SUPERVISORY PATENT EXAMINER